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## EUROPEAN PATENT APPLICATION

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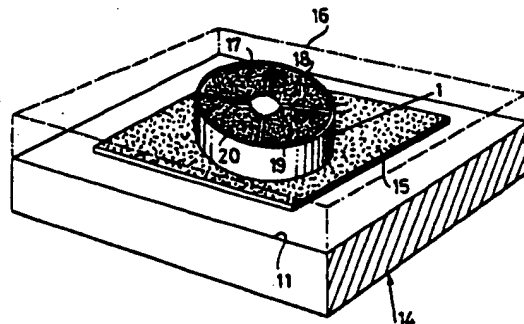
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55 Procedure for the production of a cosmetic article.

56 A fluid paste is prepared containing cosmetic powder in a liquid ingredient. A container (1) having one or more compartments (3-8) with open top and bottom is arranged in overturned position on a moulding surface (14) with an interposed sheet of absorbant material (15). The fluid paste (17-20) is poured into the container (1) through the bottom opening and then dried to form a solidified pastille (17-20) which is easily detached from the absorbant material (15), presents a surface with a pleasing appearance, and is shaped like the moulding surface (14). The container (1) with the incorporated pastille (17-20) is then returned to the erect position.



EP 0 191 198 A1

"Procedure for the Production of a Cosmetic Article"

\* \* \* \* \*

The present invention relates to a procedure for the production of a cosmetic article.

5       Cosmetic products of various kinds such as face powders, eyeshadows and others are conventionally made by pressing cosmetic powder in metal moulds to secure a solid pastille which is then placed and secured in a special container.

10       A recent technique which is beneficial from the operative viewpoint as well as that of quality and appearance of the product obtained calls for the preparation of a fluid paste at 50-60°C containing cosmetic powder, fatty alcohol and a liquid support which is volatile at low temperature, and pouring it into a container with both a top and a bottom opening, which may be  
15       divided in compartments, appropriately arranged in an overturned position on a supporting surface acting as a mould. Cooling then brings on solidification of the paste and evaporation of the volatile support with temporary migration of the fatty alcohol toward the exposed surface to form a solidified pastille which adheres to the  
20       container and presents a top side shaped in conformance with the supporting surface. The bottom of the container is then closed and the cosmetic article formed by the cosmetic pastille and its container thus obtained can be returned to the erect position and inserted in the sales package for which it is designed. A technique  
25       of this kind is illustrated in U.S. Patent No. 4,337,859.

A drawback found in the aforesaid technique with pouring of the fluid paste is the tendency of the fluid paste to stick to the surface of the mould making detachment difficult and tending to give the cosmetic product an unacceptable visible side.

30       The object of the present invention is to accomplish a pro-

cedure for the production of a cosmetic article with the aforesaid technique using the pouring of fluid paste, being careful at the same time to avoid worsening of the appearance of the visible side as a result of the cosmetic product sticking to the mould surface.

5 According to the invention said object is achieved by a procedure comprising the preparation of a fluid paste containing cosmetic powder in a liquid component, the prearrangement of a container with an open top and a bottom having an opening overturned on a moulding surface, pouring of said fluid paste into  
10 said container through said bottom opening and subjecting the fluid paste to a heat treatment such as to bring about separation of the liquid ingredient of the paste and solidification of the paste to form a solid pastille with the top side shaped like the moulding surface, characterized in that between said moulding surface and  
15 said container top is inserted in advance a sheet of absorbant material.

The use of this sheet of absorbant material provides the important effect of allowing the liquid ingredient of the paste to filter through the pores of the absorbant material, abandoning the  
20 rest of the paste, which can solidify without sticking, assuming through the same absorbing material the conformation of the moulding surface. After appropriate drying the cosmetic product thus obtained detaches readily from the absorbant material, leaving a visible surface with a pleasing appearance.

25 The evaporation is thus facilitated with the obvious benefits of fast and efficient completion of the process.

The absorbant material also acts as a soft support for the cosmetic product, preventing the fluid paste from passing from one compartment to the other with the resulting mixing of products  
30 and colours if any when the container used has several compart-

ments filled differently.

The absorbant material used can be of various kinds. In particular, it can consist of simple of cellulose or cellulose derivative paper or filter paper, natural or synthetic fiber fabric,  
5 nonwoven cloth and so on. Thickness can vary depending on the composition of the starting paste and the type of cosmetic product it is desired to obtain.

The fluid paste used can in turn be of any type in general use or, in accordance with another characteristic of the procedure  
10 according to the invention, it can consist of a cold oil-in-water emulsion in which the cosmetic powders are dispersed cold and which is poured cold into the container to then be subjected to heating to evaporate the aqueous ingredient of the paste and secure solidification of the pastille.

15 To prepare said emulsion for example a fatty ingredient consisting of a mixture of ethoxylated lanolin, glycerine, glyceryl monostearate, dimethicone, dioctyl sodium sulfosuccinate, various preservatives and water can be used. Said fatty ingredient is emulsified in cold water and to the emulsion thus formed is added,  
20 again under cold conditions, a dry ingredient consisting of cosmetic powder, dyes, pearls, and fillers such as talc or others.

These and other characteristics of the invention will be made clear by the detailed description below of some practical embodiments of the procedure according to the invention illustrated as  
25 nonlimiting examples in the annexed drawings wherein:-

Fig. 1 shows a perspective view of a multicompartiment container which can be used to obtain a cosmetic article of several colours according to the procedure of the present invention;

Fig. 2 shows said container in plan view from above;

30 Fig 3 shows a vertical cross section of said container along

plane of cut III-III of Fig. 2;

Fig. 4 shows an overall perspective view of said container in overturned position and of a mould with an interposed absorbant sheet during the pouring step of fluid pastes of different colours  
5 into the various compartments of the container;

Fig. 5 shows the same overall view as Fig. 4 after pouring of said fluid pastes;

Fig. 6 shows the same overall view as Fig. 5 in vertical cross-section as in Fig. 3;

10 Fig. 7 shows an overall perspective view as in Fig. 5 during a final step in the application of a fixing resin;

Fig. 8 shows the same overall view as Fig. 7 in vertical cross-section as in Fig. 6;

15 Fig. 9 shows a perspective view of the finished cosmetic article released from the mould and from the absorbant sheet and returned to the erect position;

Fig. 10 shows the situation of Fig. 6 when a single-compartment container is used in combination with a mould with a concave surface to obtain a cosmetic article of modified form;

20 Fig. 11 shows a perspective view of the cosmetic article obtained with the variant of Fig. 10;

Fig. 12 shows the situation of Fig. 10 when a mould with a grooved concavity is used to obtain a cosmetic article with a surface design.

25 Fig. 13 shows a perspective view of a cosmetic article obtained with the variant of Fig. 12;

Fig. 14 shows a top view of a possible insertion of the cosmetic article of Fig. 9 in a square package;

30 Figs 15-17 show top views of other possibilities of insertion of the cosmetic articles of modified form in their respective packages

of various forms; and

Fig. 18 shows an overall perspective view of a cosmetic article according to the invention inserted in a casket with a cover.

5 With reference to Figs 1-3 a typical example of a multicompart-  
ment container usable with the procedure according to the inven-  
tion for the formation of a cosmetic article of several colours, one  
per compartment, is shown therein and indicated by 1.

10 It comprises a cylindrical outer wall 2 which surrounds an  
internal space divided in four compartments 3, 4, 5 and 6 by a pair  
of diametrical partitions 7 and 8 perpendicular to each other which  
converge on a central truncated cone hub 9 developing from half  
the height of the container to the bottom thereof. A grate 10 is  
located at mid height inside said space and hence of the four  
compartments in which the space is divided.

15 The container 1 is shown in Figs. 1-3 in erect position, i.e. with  
the top 11 upward and the bottom 12 downward. As can be seen in  
Fig. 3 both the top and bottom of the container 1 open outward.

20 In accordance with the procedure according to the invention the  
container 1 is placed overturned on the moulding surface 13, for  
example flat as in Figs. 4-8, of a mould 14 with an interposed  
sheet of absorbant material 15, for example paper or cloth of  
appropriate thickness,. A countermould 16 locks the container 1 in  
the desired position (Figs. 4-6).

25 Fluid pastes are prepared apart, each paste consisting of a cold  
oil-in-water emulsion in which are dispersed cold cosmetic powders  
of different colours. For example, according to the invention a  
fatty ingredient consisting of a mixture of ethoxylated lanolin,  
glycerine, glyceryl monostearate, dimethicone, dioctyl sodium sulfo-  
succinate, various preservatives and water is emulsified in cold  
30 water and to the emulsion thus formed is added, cold this time

also, a dry ingredient consisting of cosmetic powders, dyes, pearls and fillers such as talc or others.

Each of said fluid pastes indicated with reference numbers 17, 18, 19 and 20 in the drawings, is then poured cold (Fig. 4) into one of the compartments 3, 4, 5 and 6 of the overturned container 1, through the openings in the bottom 12 thereof. The container 1 is thus filled with four distinct portions of fluid paste of different colours 17-20 separated by the partitions 7 and 8 and by the seal provided by the absorbant sheet 15. This condition is shown in Figs. 5 and 6.

The filled container is left in the condition of Figs. 5 and 6 and subjected to a temperature of approximately 50°C for 10-12 hours to bring about drying and solidification of the various pastes. In this step the aqueous ingredient of the paste partly evaporates and partly filters through the absorbant sheet 15, thus abandoning the paste. As a result the solid pastilles 17-20 of slightly reduced height (Fig. 8) are formed, presenting on the bottom the smooth conformation of the moulding surface 13 and are firmly attached to the container 1 thanks to the grate 10 now incorporated in the pastille. A thin layer of fixing resin 21 is applied for greater safety to the bottom, which is still turned upward, of the container as shown in Figs. 7 and 8.

A finished cosmetic article 22 is thus obtained which, when extracted from the mould, returned to the erect position and freed of the absorbant sheet 15, appears as shown in Fig. 9, i.e. with four cosmetic pastilles 17-20 of different colours and of pleasing appearance housed in their respective compartments in container 1.

Alternatively, a container like that shown in Figs. 1-3 but without the partitions 7 and 8 and hence having a single compartment can be used for the procedure according to the invention with

a single fluid paste to accomplish a cosmetic article like the one shown in Fig. 9 but with a single solid pastille of a single colour.

If desired, it is also possible to provide the cosmetic article with a convex instead of flat visible side as shown in Fig. 9. In  
5 this case a container 1 with a single compartment is placed in overturned position on a mould with its moulding surface provided with a concavity 23 (Fig. 10), again with the interposition of an absorbant sheet 15, which assumes in turn the concave form of the moulding surface. The result is a cosmetic article with a single  
10 pastille 26 with convex visible side such as illustrated in Fig. 11.

In addition to being convex the visible side of the cosmetic article can be designed with grooves 24 such as shown in Fig. 13. In this case the moulding surface must have the concavity 22 furnished with grooves 25 as shown in Fig. 12.

15 Other designs of the visible side of the cosmetic article can be accomplished by appropriately shaping the moulding surface.

In addition the cosmetic article can have a form different from the circular form illustrated in Figs. 9, 11 and 13 just as it can be divided in compartments different from those illustrated in Fig. 9.

20 Whatever its conformation, the cosmetic article 22 is designed in general to be included in a sales package of a form corresponding to that of the article. Examples of sales packages are illustrated and indicated with reference number 27 in Figs. 14-17.

As an example, Fig. 18 shows a sales package consisting of a  
25 casket 28 with cover 29 in which is inserted a cosmetic article 22 including a shaped pastille 26, for example in the form of a cat, in a container 30 with a grate 31 furnished with a corresponding space to contain it.



## CLAIMS

1. Procedure for the production of a cosmetic article comprising the preparation of a fluid paste containing cosmetic powder in a liquid ingredient, the arrangement of a container with open top, and a bottom with an opening in overturned position on a moulding surface, the pouring of the fluid paste into said container through said bottom opening and the subjection of the fluid paste to a heat treatment such as to bring about separation of the liquid ingredient from the paste and solidification of the paste itself until it forms a solid pastille with the top side shaped like the moulding surface, characterized in that between said moulding surface and said container top a sheet of absorbant material is first inserted.
2. Procedure according to claim 1 characterized in that said sheet of absorbant material consists of absorbant paper.
3. Procedure according to claim 1 characterized by the fact that said sheet of absorbant material consists of filter paper.
4. Procedure according to claim 1 characterized in that said sheet of absorbant material consists of cloth.
5. Procedure according to claim 1 characterized in that said sheet of absorbant material consist of nonwoven cloth.
6. Procedure according to claim 1 characterized in that said liquid ingredient is water.
7. Procedure according to claim 1 characterized in that said fluid paste consists of a cold oil-in-water emulsion in which are dispersed cold cosmetic powders.
8. Procedure according to claim 7 characterized in that said fluid paste comprises a fatty ingredient consisting of ethoxylated lanolin, glycerine, glyceryl monostearate, dimethicone, dioctyl sodium sulfosuccinate, various preservatives and water, and a dry ingredient consisting of cosmetic powder, dyes, pearls and various

fillers, said fatty ingredient being emulsified in cold water and the dry ingredient being added cold to the emulsion thus formed.

9. Procedure according to claim 1 characterized in that said fluid paste is poured cold into said container.

5 10. Procedure according to claim 9 characterized in that said heat treatment calls for heating the fluid paste at a temperature higher than that at which it is poured.

11. Procedure according to claim 1 characterized in that it comprises the final application of a fixing resin on the bottom side  
10 of the solidified pastille.

12. Procedure according to claim 1 characterized in that said container has a grate for anchoring the solidified pastille.

13. Procedure according to claim 1 characterized in that said container is divided in compartments to receive the respective  
15 fluid pastes.

14. Procedure according to claim 1 characterized in that said moulding surface has a concavity for the shaping of a solid pastille with a convex top side.

15. Procedure according to claim 1 characterized in that said  
20 moulding surface has designs for shaping the top side of the solidified pastille.

25

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Fig.1

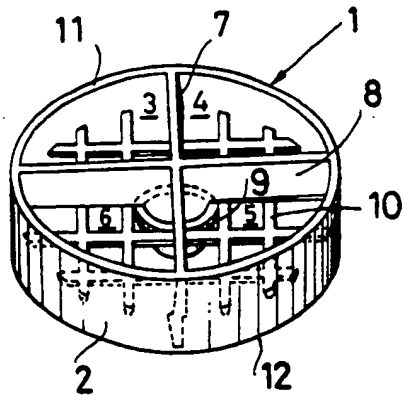


Fig.2

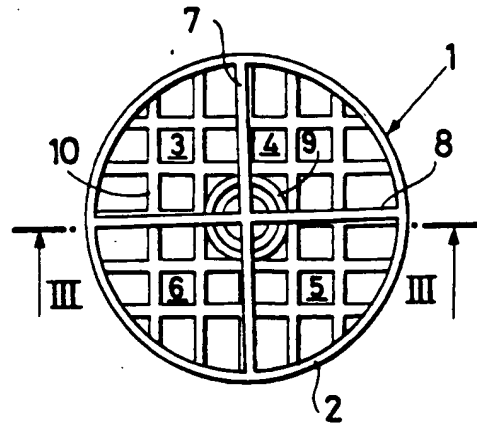


Fig.3

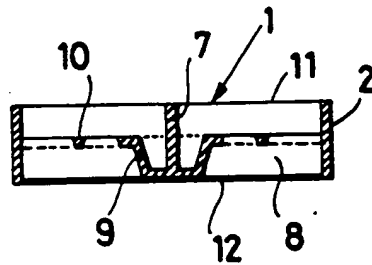


Fig.6

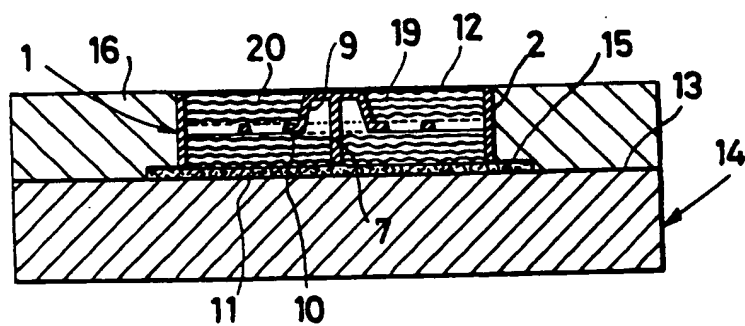


Fig.4

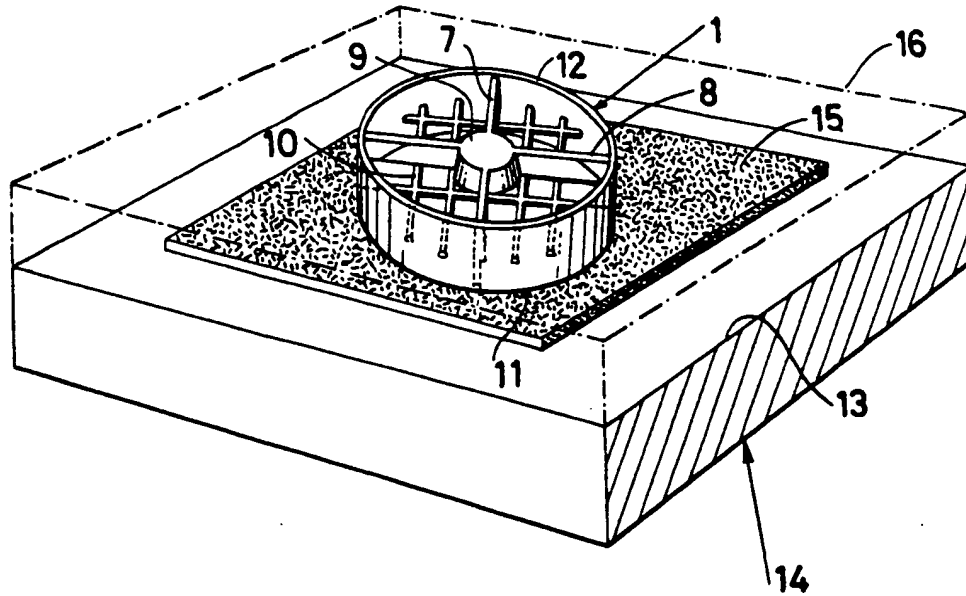
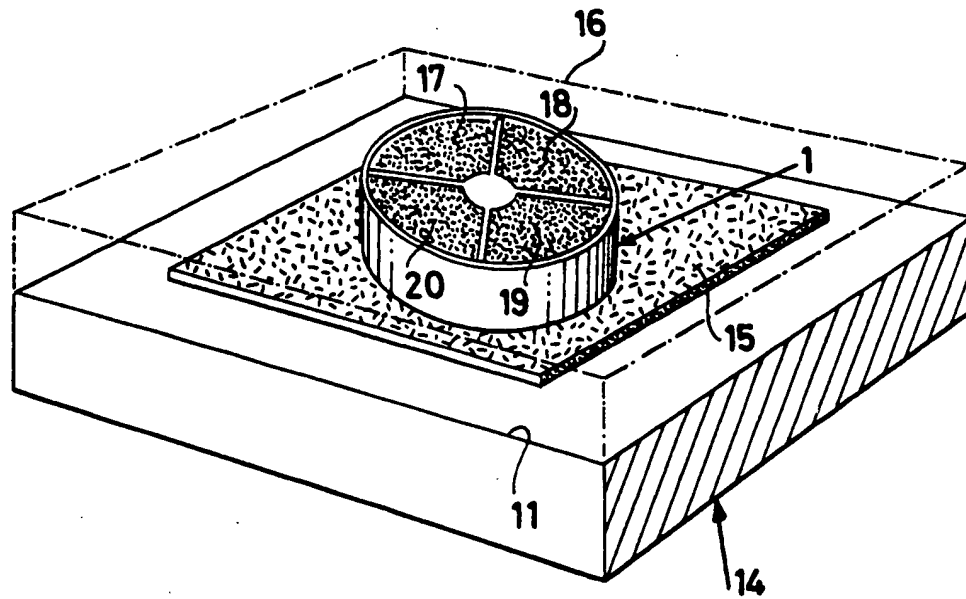


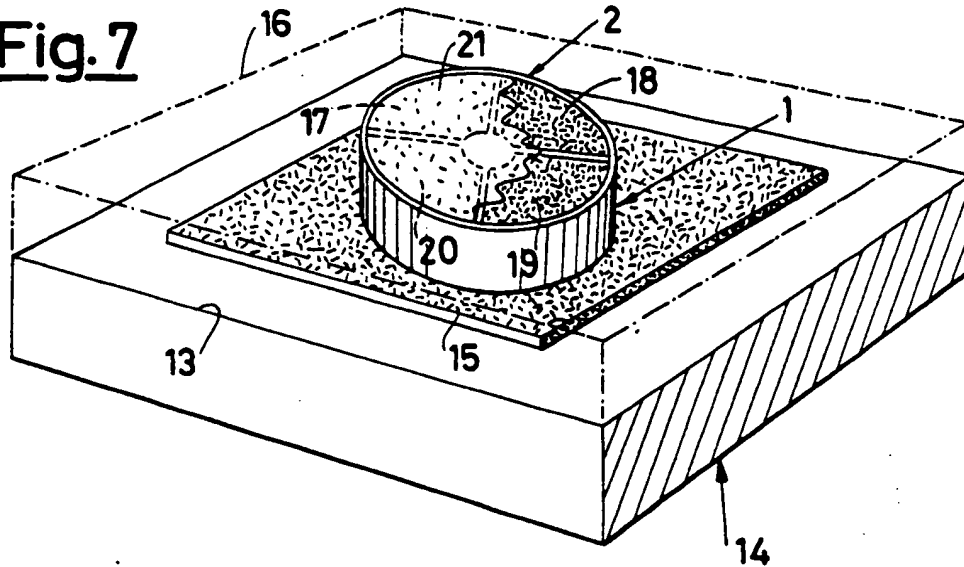
Fig.5



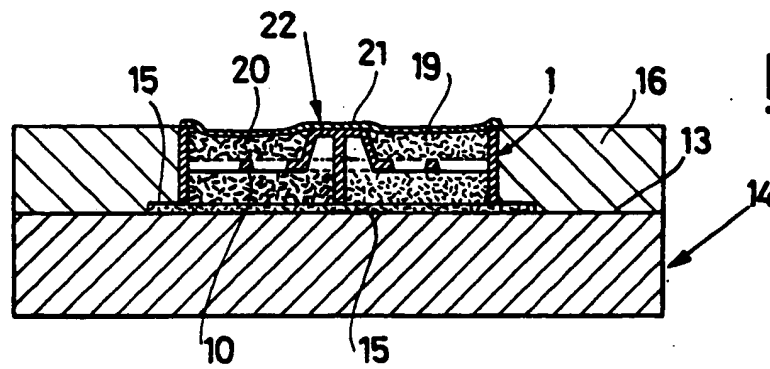
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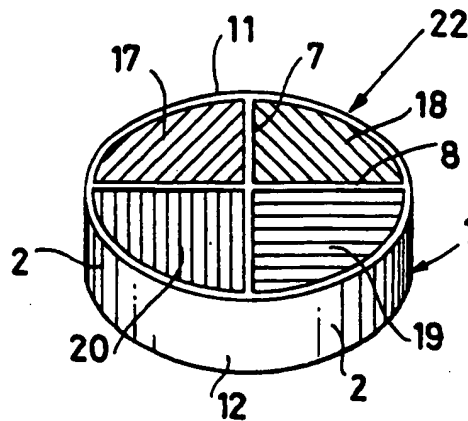
**Fig. 7**



**Fig. 8**



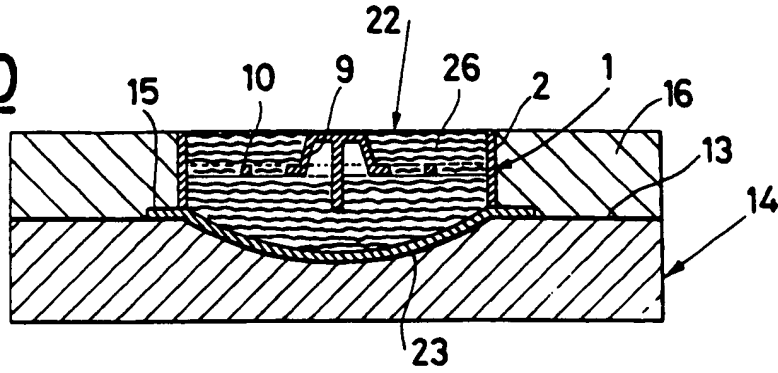
**Fig. 9**



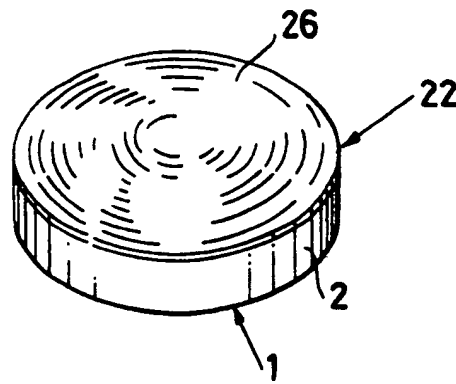
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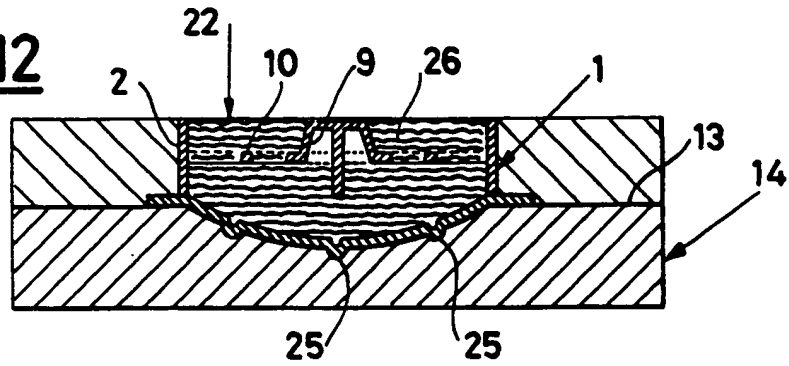
**Fig.10**



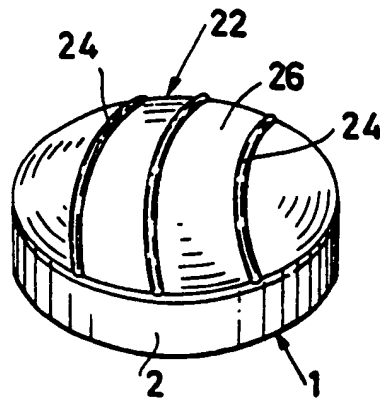
**Fig.11**



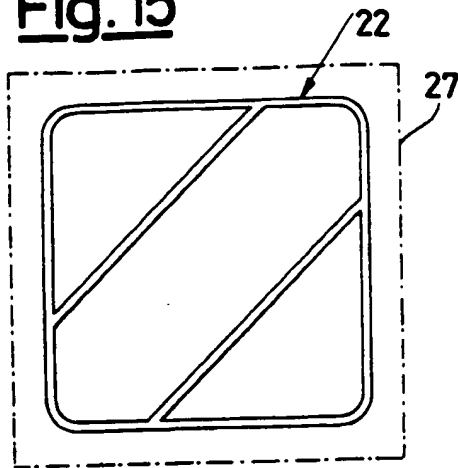
**Fig.12**



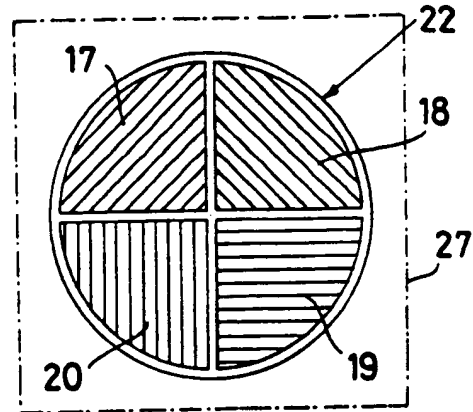
**Fig.13**



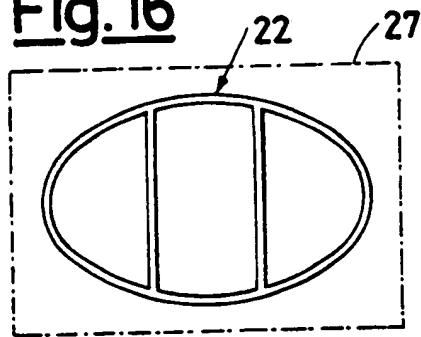
**Fig. 15**



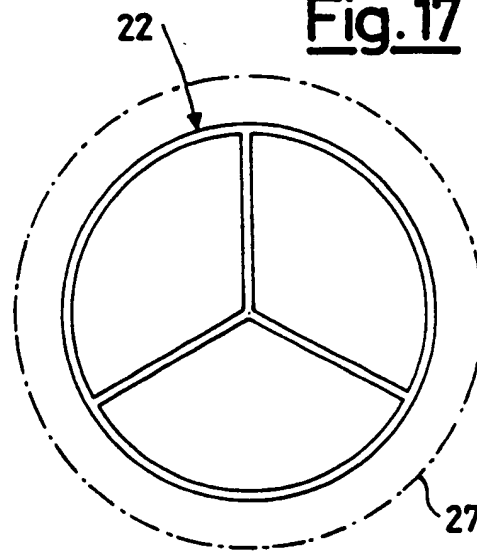
**Fig. 14**



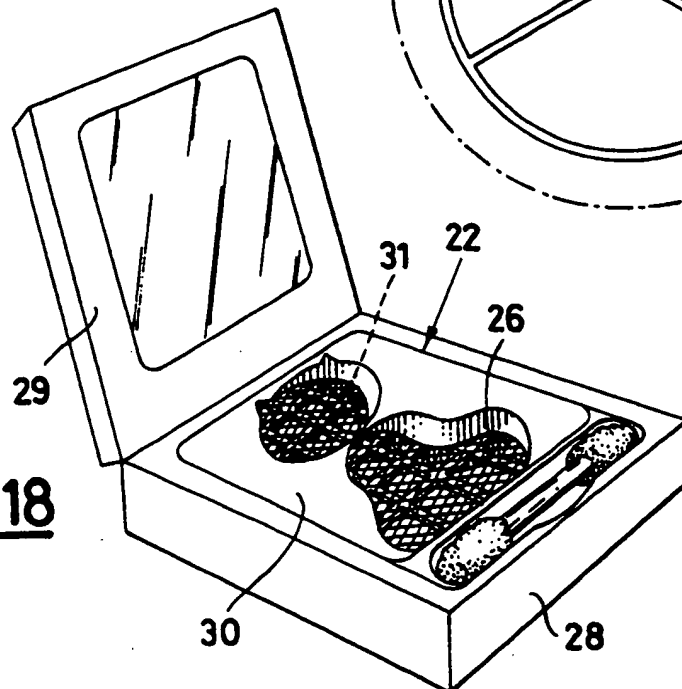
**Fig. 16**



**Fig. 17**



**Fig. 18**





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# EUROPEAN SEARCH REPORT

0191198

Application number

EP 85 20 1989

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int. Cl. 4)
X	EP-A-0 038 645 (KOLMAR) * Whole document * & US - A - 4 337 859 (Cat. D)  -----	1-15	A 45 D 33/00 A 61 K 7/00
			TECHNICAL FIELDS SEARCHED (Int. Cl. 4)
			A 45 D A 61 K
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 21-05-1986	Examiner LEROY ALAIN
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